

REMARKS

The Office Action mailed May 6, 2003 has been received and the Examiner's comments carefully reviewed. Claims 3, 12, 20 and 21 have been allowed. Applicant thanks the Examiner for this notification. Claims 10, 29, 34 and 35 have been amended. No new subject matter has been added. Claims 1, 3-10, 12-21, and 23-36 are currently pending. Applicant respectfully submits that the pending claims are in condition for allowance.

Examiner Interview

Applicant's below signed representative conducted a telephone interview with Examiner Pezzlo on July 24, 2003. The interview was directed toward the applicability of the Imoto reference cited by the Examiner, distinctions between the claimed invention and Imoto, and claim amendments to clarify some of the recited features in particular claims. The Examiner suggested that Applicant submit a Response including clarifications to claim 10 and arguments regarding the discussed distinctions. The Examiner is thanked for his time and constructive comments.

Claim Objections

Claim 29 was objected-to for typographical informalities. Claim 29 has been amended to properly spell the word "value." It is noted that with regards to "the first input value" on line 16, this recitation is correct as both the first and second braking outputs and corresponding first and second forces are achieved when the manual control input is operated at the first input value (e.g. pedal position). In light of the amendment to claim 29, Applicant respectfully requests withdrawal of this objection.

Rejections Under 35 U.S.C. §102

The Examiner rejected claims 10, 13-19, 23, and 25-36 under 35 U.S.C. §102(b) as being anticipated by Imoto et al. (U.S. Patent 4,755,008). Applicant respectfully traverses this rejection, but has amended claims 10, 29, 34 and 36 to advance this application to allowance. Applicant reserves the right to pursue the original subject matter via a continuing application.

It is noted that claim 19 depends upon allowed claim 21. It is believed that inclusion of claim 19 is a typographical error and the rejection should read claims 10, 13-18, 23, and 25-36. Clarification is requested if this belief is incorrect.

I. Claims 10, 13-18, 25 and 26

Claim 10 has been amended to clarify that the recited brake valve includes a secondary valve that functions to increase the braking output produced by the primary valve. In particular, claim 10 recites that the primary valve assembly includes an outport for communicating a braking output, and that the secondary valve assembly increases the braking output communicated through the outport of the primary valve assembly.

Imoto does not disclose a brake valve having a primary valve assembly with a outport to communicate a braking output, wherein the braking output communicated is increased by a secondary valve assembly. Rather, Imoto discloses a master cylinder 12 and a valve 201, both of which have separate outputs that flow to a summation device 202. The valve 201 operates to increase the summation output, and does not increase the master cylinder output. At least because Imoto does not disclose a secondary valve assembly configured to increase the braking output communicated through the outport of a primary valve assembly, Applicant respectfully submits that claim 10, and dependent claims 13-18, 25, and 26 are patentable.

II. Claims 27 and 28

Claim 27 recites a braking system for providing a range of braking outputs, the braking system including a pedal, a primary valve assembly, and a secondary valve assembly. In operation, the system provides a first braking output and a first pedal feedback force. The system also provides a second braking output and a second pedal feedback force. As recited in claim 27, both the first and second braking outputs and both the first and second pedal feedback forces are provided when the pedal is operated in a first position.

Imoto does not disclose a system that provides first and second pedal feedback forces. In particular, the summation device 202 of Imoto receives the separate pressure outputs from the master cylinder 12 and valve 201. To include a feature as recited in claim

27, the summation device 202 would have to be modified to include some type of mechanical feedback to the pedal 14. Imoto neither discloses, nor teaches or suggests providing a feedback force from the summation device 202 to the pedal 14. At least for this reason, Applicant respectfully submits that claim 27, and dependent claim 28 are patentable.

III. Claims 29-33

Claim 29 recites a braking system providing first and second braking outputs and corresponding first and second forces that act upon an actuation mechanism. At least because Imoto does not disclose a system providing first and second forces (corresponding to first and second braking outputs) that act upon an actuation mechanism, Applicant respectfully submits that claim 29, and dependent claim 30-33 are patentable.

IV. Claims 34-36

Claim 34 recites a braking system that, in operation, defines an operating ratio of pedal feedback force to operating position of a pedal. The system includes a secondary valve configured to operate with a primary valve assembly and increase the operating ratio while the pedal remains in a first operating position. At least because Imoto cannot increase an operating ratio as recited, i.e. increase the pedal feedback force while the pedal remains in the first operating position, Applicant respectfully submits that claim 34, and dependent claim 35-36 are patentable.

Rejections Under 35 U.S.C. §103

The Examiner rejected claims 1, 4-9, 23, and 24 under 35 U.S.C. §103(a) as being unpatentable over Imoto et al. (U.S. Patent 4,755,008). Applicant respectfully traverses this rejection.

Claim 1 recites a braking system including a secondary valve assembly integral with a primary valve assembly; the secondary valve assembly assists the braking output produced by the primary valve assembly.

Imoto does not teach or suggest integral primary and secondary valve assemblies. In contrast, the master cylinder 12 is separate from valve 201, both of which are separate from a summation device 202. To provide a braking system as recited in claim 1, each of the

master cylinder 12, the valve 201, and the summation device 202 would have to made integral.

Integrating each of the master cylinder 12, the valve 201, and the summation device 202 into a single device is neither taught nor suggested by Imoto. Further, it is respectfully submitted that incorporating these three components into a single large device would render the device inoperable in its intended use as the device would likely be too large and too bulky for use on a vehicle; rather Imoto teaches networking the components via tubing to accommodate spatially-separated placement of each component.

Because Imoto neither teaches or suggests integral primary and secondary valve assemblies, Applicant respectfully submits that this rejection can only be based upon impermissible hindsight reconstruction. Applicant therefore submits that claim 1, and dependent claims 4-9 and 24 are patentable.

Claim 23 depends upon claim 10. In view of the remarks regarding independent claim 10, further discussion regarding the independent patentability of dependent claim 23 is believed to be unnecessary. Applicant submits that dependent claim 23 is in condition for allowance.

Allowable Subject Matter

The Examiner indicated that claims 3, 12, 20, and 21 are allowable. Applicant thanks the Examiner for this notification.

SUMMARY

It is respectfully submitted that each of the presently pending claims (claims 1, 3-10, 12-21, and 23-36) is in condition for allowance and notification to that effect is requested. The Examiner is invited to contact Applicant's representative at the below-listed telephone number if it is believed that prosecution of this application may be assisted thereby.

Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicant reserves the right to raise these arguments in the future.



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Respectfully submitted,

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